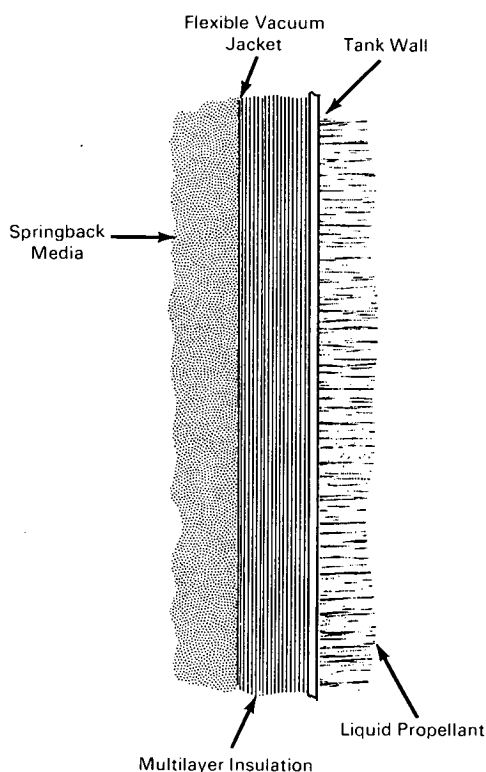


NASA TECH BRIEF



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A New Method for Fabrication of Flexible Vacuum Purge Jackets



How it's done:

A polyurethane-coated synthetic fabric can be fitted with a glass mat exterior which has a high degree of springback ability. The material used in this innovation is capable of maintaining its springback capability in a temperature range from ambient to cryogenic. The exterior of the fabric is coated with G-207 resin and the glass mat material is pressed onto the fabric until the resin dries and the bond is secure. To allow the purge gas (helium) to escape during ascent, a zipper is built into the design to release at 0.5 psi pressure differential.

Notes:

1. The information contained in this Tech Brief may be of interest to designers and manufacturers of space vehicles.
2. Requests for further information may be directed to:
Technology Utilization Officer
Marshall Space Flight Center
Huntsville, Alabama 35812
Reference: TSP69-10564

Patent status:

No patent action is contemplated by NASA.

Source: C. B. Shriver of
Goodyear Aerospace Corporation
under contract to
Marshall Space Flight Center
(MFS-12646)

Category 03

The problem:

A need exists for a flexible vacuum springback jacket for fuel tanks capable of retaining springback force in extremes of pressure and temperature.

The solution:

Bond the springback material (filament-glass) to the jacket fabric.